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ABSTRACT

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The Effects of Integration on the Social Class Structure of the Elementary Classroom

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ABSTRACT

The impact of a school desegregation plan on the social class structure of elementary classrooms (Grades 1-6) was studied within a large midwestern school system. Sociograms administered on a pre/post basis, over a two year period, to all classrooms with at least four minority students per room served as the data base. Initial analyses reveal separation on the basis of sex to be highly significant across all grade levels for all years. A stricter test of choice patterns was conducted by subsetting the data to those classrooms containing at least four minority students of the same sex. Results of this test did not confirm a relationship between segregative choice patterns and the percentage of minority students in a classroom; i.e., the higher the percentage of minority students in a classroom the more likely significant segregative choices being made by students, was not evident.

On March 3, 1977, the Board of Directors of the Des Moines Independent Community School District, Des Moines, Iowa adopted the Des Moines Desegregation Program. The program was the result of a Memorandum of Understanding with the U.S. Office of Civil Rights (OCR) (Department of Health, Education and Welfare), and was a voluntary action on behalf of the Des Moines School District. The plan consisted of two major features: 1) reduction of the elementary pupil assignments in a group of seven elementary buildings adjusting the percentage of minority students to a level acceptable to OCR, 2) insure that all Latino and Hispanic students within the district, who would benefit from the services of a Bilingual/English as a Second Language (ESL) program would be included.

The implementation of the elementary pupil assignment portion of the desegregation program, effective with the commencement of the 1977-78 school year, resulted in 1) restructuring 10 elementary attendance areas by pairing three predominately black schools with neighboring white schools, 2) clustering three schools, 3) closing one building with a high minority enrollment and assigning those pupils to a building with a low minority enrollment. In the paired schools grades kindergarten through three are offered in one building and four through six in the other. The clustered schools feature ungraded and multi-age groupings, as well as self-contained, graded classrooms K-6. As of October 1979, total district enrollment equalled 34,043, 15.2% of that total representing the minority student population. Approximately 18,000 pupils are enrolled in the elementary schools, Grades K-6, 16% of which are minority students.

To assess the impact of the desegregation plan the Department of Evaluation was directed by the Board of Directors to monitor all facets of the program. This paper focuses on the impact of desegregation on the social class structure of elementary classrooms which is only one aspect of the total evaluation. In particular we were interested in examining fall and spring data to determine how the ensuing years affected the interpersonal interaction patterns of the students involved.

METHODOLOGY

The target population of this study was the first through sixth grades at the ten elementary schools involved in the desegregation program as a result of the March 1977 Memorandum. These schools are identified in Tables 1, 2, and 3 by the following numbers: 436, 490, 503, 526, 620, 733, 751 (Note, 436, 490 and 620, represent the paired buildings). The remaining schools in Table 2 represent those schools that have been participating in the Voluntary Transfer Program (VTP) since 1968 and are included as a basis for comparison.

Table 1 presents the total enrollments of each building (Grades K-6) as well as the minority percentage enrollments. The January 1977 column reflects the enrollments and percentages of the 10 buildings prior to pairing and clustering. As of January 1977, the total K-6 enrollment was 20,250, with a 13.2% minority enrollment. In September 1977, the K-6 enrollment was 19,236, with a 13.5% minority enrollment. In September 1978 and 1979 the K-6 enrollment and minority percentage figures for the district were 18,547 (14.9%) and 17,980 (15.7%) respectively.

Table 1

Total Enrollments and Minority Percentages
Grades K-6

School	September 1979 Enr.	%	September 1978 Enr.	%	September 1977 Enr.	%	January 1977 Enr.	%
436	528	41.1	584	36.0	631	33.6	347	71.8[1]
							447	13.4
490	719	36.4	758	35.4	811	29.2	545	49.3[1]
							495	8.5
620	858	37.0	740	39.6	775	32.7	420	53.8[1]
							467	12.2
733	532	33.1	577	30.2	617	31.0	500	42.8[2]
751	374	29.4	374	27.8	337	20.5	276	6.2[2]
503	324	32.1	316	28.8	321	24.3	360	12.8[2]
526	480	25.8	513	28.5	586	26.6	464	3.9
							227	76.2[3]

1. Individual building enrollments and percentages prior to pairing.
2. Building enrollments and percentages prior to clustering.
3. Enrollment and percentage minority prior to closing of building. Students sent to 526 September 1977.

The decision was to monitor interracial "friendliness" (St. John and Lewis, 1975) on the part of both races over a three year period commencing with the 1977-78 school year in Grades 1-6. A sociometric measure was developed with the intent of being given on a pre/post basis (October and April) of each year. Because of logistic difficulties and administrative concerns the sociogram was not administered in the Spring of 1978; the Spring 80 administration will mark the completion of the project unless the Board of Directors decides differently.

The decision to incorporate a sociometric measure was based principally upon the qualities discussed by Lindzey and Borgatta (1954):

1) the variables represented by sociometric measures are about as purely social as possible, and describe the quality of interpersonal relations within groups; 2) sociometric measures provide a means of representing an important part of the individual's social environment as it is perceived by the subject; 3) ease and speed of administration, minimal expense, and minimal classroom interruption were all considered crucial to the adoption of this technique.

The significance of this study to social (desegregation) research is considered twofold, because of the lack of such combined features in previous research studies. First, because of the large sample size, inclusion of grade levels one through six in the affected schools and the pre/post administration of the sociograms to intact classrooms the study could serve as a basis for secondary (meta) analysis as well as offer evidence supporting or refuting previous findings from smaller studies. Secondly, the longitudinal nature of the study provides a clearer picture of "integregative impact" a feature, as noted by Hawley (1979), as not present in many studies directed at assessing the effects of school desegregation programs.

The sociometric measure was employed in all classrooms (Grades 1-6, in all affected schools) containing at least four minority students, thus permitting a child to make a completely segregative choice. Simply stated each child was asked the following question, "If you could sit next to any student in this classroom who are three you would like to sit next to?" Each sociogram was analyzed via the Chi-square technique (Jahoda, et al., 1951) and techniques for testing the significance of combined results as outlined by Jones and Fiske (1953). The choice patterns for each experimental unit (classroom) were considered statistically

independent of the patterns exhibited by other classrooms with the principal test of hypothesis, under the combined results model, being that the composite p value for the tests among classrooms within a grade level having occurred by chance. Of particular importance to this study is the relationship or frequency of significant segregative choices relative to the percentage of minority students within classrooms.

RESULTS

Initial analysis concentrated upon the degree of sex separation. It was found (for all years) that separation on the basis of sex was highly significant for all classrooms across all grade levels, i.e., girls and boys tended to choose among themselves, neither choosing members from the oppostive sex. On the basis of this information the study concentrated upon analyzing the interracial choice patterns for the sexes separately. Table 2 presents the results of these analyses ("X's" represent segregative choices; "+'s" represent no data collected at that level).

Two patterns emerge from the study of Table 2, for the results of girls and boys segregative choices. One, throughout the grade levels girls tend to make a higher frequency of segregative choices than boys; two, the pattern of significant/non-significant segregative choices is unrelated to the percentage of minority students of both sexes across the grade levels. That is, on the basis of this analysis the significance of segregative choices is not a function of the numbers of minority students in a classroom(s).

A stricter test of choice patterns presented in Table 2 was made because of the significance of sex separation since the classrooms analyzed, although containing at least four minority students per classroom(s) did not necessarily contain four minority students of either sex.

TABLE 2 A[1]

Results of Sociogram Administration for Girls
Fall 1977 through Spring 1980

School	Grade	Year of Administration					Classroom Average % of Minority Girls				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
409		+[a]	-[b]	-	-		+	33	25(1)[e]	10(2)	
	1	+	-	-	+		+	33	25(1)	+	
	4	+	+	+	-		+	+	+	11(1)	
	6	+	+	+	-		+	+	+	8(1)	
436		x[c]	x	x	-		37(19)[d]	36	38(20)	40(20)	
	1	x	x	-	-		34(4)	30	34(3)	42(3)	
	2	x	-	-	-		45(4)	35	35(4)	36(3)	
	3	x	-	-	-		33(4)	48	49(3)	35(4)	
	4	x	x	x	-		30(3)	31	30(3)	55(4)	
	5	x	x	-	x		43(3)	30	32(3)	29(3)	
	5-6	+	x	x	+		+	50	50(1)	+	
	6	+	x	-	-		+	37	44(3)	41(3)	
463		-	-	x	-		33(1)	20	22(1)	27(1)	
	4	+	-	x	+		+	20	22(1)	+	
	5-6	+	+	+	-		+	+	+	27(1)	
490		x	x	x	x		36(30)	38	37(28)	39(25)	
	1	-	-	-	-		38(6)	45	43(5)	35(5)	
	2	x	x	-	x		27(1)	41	47(5)	32(3)	
	3	x	x	x	x		25(1)	46	46(6)	54(5)	
	4-5	x	x	x	x		32(5)	32	27(7)	45(6)	
	5-6	x	x	x	x		24(5)	26	25(5)	28(6)	
503		-	x	-	x		30(8)	31	36(9)	34(11)	
	1	+	x	-	-		+	43	50(2)	31(2)	
	2	-	-	-	-		23(2)	28	37(2)	44(2)	
	3	-	-	x	x		14(2)	34	43(2)	39(2)	
	4	-	-	-	-		40(1)	14	20(1)	38(2)	
	5	+	-	-	-		+	21	8(1)	23(1)	
	6	x	x	x	-		31(1)	31	33(1)	21(1)	
	5-6	+	+	+	-		+	+	+	25(1)	
526		x	x	x	x		31(22)	28	28(19)	31(14)	
	1	x	-	x	-		42(4)	16	16(3)	33(1)	
	2	-	x	x	-		29(3)	41	40(4)	15(2)	
	3	-	-	-	-		27(4)	21	24(2)	35(3)	
	4	x	-	x	-		29(4)	26	27(3)	25(1)	
	5	x	-	-	-		38(3)	28	28(4)	29(3)	
	6	-	x	x	x		23(4)	28	29(3)	33(4)	
562		-	-	-	-		25(1)	22	20(2)	19(3)	
	1	+	-	-	+		+	22	20(2)	20(1)	
	2	+	+	+	-		+	+	+	18(2)	
571		-	-	-	+		13(2)	14	17(1)	+	
	5	+	-	-	+		+	14	17(1)	+	

Table 2 A[1] Continued

School	Grade	Year of Administration					Classroom Average % of Minority Girls				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
598		+	x	-	-		+	23	19(3)	18(5)	
	1	+	-	-	-		+	27	21(2)	20(2)	
	2-3	+	x	-	+		+	14	15(1)	+	
	2	+	+	+	-		+	+	+	18(2)	
	4	+	+	+	-		+	+	+	15(1)	
620		x	x	x	x		38(27)	40	39(23)	38(30)	
	1	x	x	-	-		44(5)	35	35(5)	47(6)	
	2	x	x	-	-		41(5)	36	39(4)	37(5)	
	3	x	-	x	-		37(5)	48	46(4)	37(5)	
	4	x	x	x	x		29(4)	44	39(4)	40(5)	
	5	x	x	x	x		36(4)	22	25(2)	40(5)	
	6	x	x	x	x		41(4)	45	43(4)	26(4)	
661		-	-	-	-		23(5)	19	19(5)	24(8)	
	1	-	-	-	-		36(1)	12	11(1)	36(3)	
	2	+	-	-	-		+	36	40(1)	0(1)	
	3	-	-	-	-		31(1)	10	8(1)	17(1)	
	4	+	+	+	-		+	+	+	17(1)	
	5	x	-	-	-		23(1)	12	11(1)	33(1)	
	6	+	-	-	-		+	25	23(1)	15(1)	
724		-	x	x	x		23(11)	26	30(3)	25(5)	
	1	-	-	-	x		27(3)	18	20(2)	22(2)	
	2	-	x	x	+		20(2)	40	50(1)	+	
	3-4	+	+	+	-		+	+	+	37(1)	
	5	+	+	+	-		+	+	+	22(1)	
	6	+	+	+	x		+	+	+	20(1)	
733		x	x	x	-		33(19)	33	34(17)	35(18)	
	1	x	-	-	-		41(4)	26	31(4)	30(4)	
	2	-	x	x	-		17(3)	43	39(3)	33(3)	
	3	-	-	-	-		27(4)	16	18(2)	41(4)	
	4	-	-	x	-		25(3)	38	39(3)	17(2)	
	5	-	x	x	-		42(2)	33	39(2)	41(2)	
	6	x	-	-	-		43(2)	31	26(2)	42(2)	
	5-6	x	-	x	x		55(1)	47	53(1)	43(1)	
751		-	-	x	-		25(11)	30	31(10)	36(11)	
	1	-	x	-	-		32(2)	25	29(2)	32(2)	
	2	-	-	-	-		30(2)	39	36(2)	44(2)	
	3	x	-	-	-		18(2)	48	42(2)	35(2)	
	4	-	-	x	-		26(2)	12	12(1)	48(2)	
	5	-	-	x	x		21(2)	24	31(2)	23(1)	
	6	-	-	-	-		21(1)	10	22(1)	27(2)	
819		-	x	x	x		28(7)	39	44(8)	38(11)	
	1	-	-	-	-		36(2)	35	40(2)	55(2)	
	2	-	-	-	-		25(2)	35	46(2)	39(2)	
	3	-	x	x	-		29(2)	41	45(2)	37(2)	
	4	x	x	-	x		13(1)	46	47(2)	29(2)	
	5	+	+	+	x		+	+	+	37(2)	
	6	+	+	+	-		+	+	+	29(1)	

Table 2 A[1] Continued

School	Grade	Year of Administration: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Classroom Average % of Minority Girls: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
913		-	-	-	+		23(6)	34	34(2)	+	
	6	-	-	x	+		7(1)	18	18(1)	+	
	4-5	+	-	-	+		+	50	50(1)	+	
922		x	x	x	-		30(11)	29	30(11)	34(10)	
	1	x	x	x	-		42(3)	29	30(2)	24(1)	
	2	-	x	-	-		17(2)	45	50(2)	32(2)	
	3	x	-	-	-		30(2)	21	20(2)	47(3)	
	4	+	-	x	-			27	29(2)	10(1)	
	4-5	+	+	+	-		+	+	+	23(1)	
	5	-	x	-	x		26(2)	25	13(1)	38(2)	
	6	x	-	x	-		38(1)	25	26(2)	+	
931		+	+	+	-		+	+	+	17(1)	
	3	+	+	+	-		+	+	+	17(1)	

a. Pluses indicate that no sociogram information was compiled because there were not at least four minority students in a classroom at that grade level for that school.

b. Dashes indicate that no statistically significant segregative choices were made.

c. X's indicate that segregative choices were statistically significant ($p < .05$) for that particular grade level.

d. Number in parenthesis for Fall 1977 indicate the total number of classrooms administered the sociogram at that building and at that grade level.

e. Number in parenthesis for Spring 1979 indicate the total number of classrooms administered the sociogram at that building and at that grade level. The classrooms are the same rooms for both the Fall 1978 and Spring 1979 administration.

TABLE 2 B[1]

Results of Sociogram Administration for Boys
Fall 1977 through Spring 1980

School	Grade	Year of Administration: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Classroom Average % of Minority Boys: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
409		+[a]	-[b]	-	+		+	8	7(1)[e]	18(2)	
	1	+	-	-	+		+	8	7(1)[e]	+	
	4	+	+	+	+		+	+	+	19(1)	
	6	+	+	+	+		+	+	+	18(1)	
436		x[c]	-	x	x		35(19)[d]	42	42(20)	46(20)	
	1	x	-	x	-		40(4)	49	54(3)	46(3)	
	2		-	x	-		26(4)	38	42(4)	57(3)	
	3	-	-	-	x		42(4)	46	32(3)	44(4)	
	4	-	-	x	-		33(3)	40	42(3)	40(4)	
	5	x	-	-	x		33(3)	38	43(3)	43(3)	
	6	+	x	x	x		+	42	39(3)	46(3)	
	5-6	+	-	-	+		+	50	43(1)	+	
463		-	-	-	-		17(1)	20	20(1)	18(1)	
	4	-	-	-	+		17(1)	20	20(1)	+	
	5-6	+	+	+	-		+	+	+	18(1)	
490		-	x	x	x		26(30)	34	34(28)	34(25)	
	1	-	-	-	-		22(6)	46	46(5)	31(5)	
	2	-	-	-	-		9(1)	29	30(5)	32(3)	
	3	-	-	-	-		30(1)	38	36(6)	21(5)	
	4-5	-	x	-	x		22(5)	32	33(7)	42(6)	
	5-6	-	x	x	x		16(5)	26	26(5)	41(6)	
503		-	-	x	-		31(8))	30	39(9)	35(11)	
	1	+	x	x	-		+	26	33(2)	21(2)	
	2	-	-	-	-		33(2)	29	38(2)	36(2)	
	3	-	-	x	x		36(2)	27	43(2)	44(2)	
	4	-	-	-	-		25(1)	33	56(1)	36(2)	
	5	+	-	-	x		+	45	40(1)	31(1)	
	5-6	+	+	+	-		+	+	+	46(1)	
	6	-	-	-	-		23(1)	27	27(1)	36(1)	
526		x	x	x	x		29(22)	34	35(19)	29(14)	
	1	-	x	x	-		31(4)	43	43(3)	0(1)	
	2	x	-	-	-		31(3)	31	36(4)	40(2)	
	3	-	-	x	x		23(4)	45	29(2)	33(3)	
	4	x	-	-	-		43(4)	22	27(3)	18(1)	
	5	x	x	x	x		29(3)	40	38(4)	27(3)	
	6	-	x	x	x		14(4)	29	32(3)	32(4)	
562		-	-	-	x		20(1)	7	21(2)	20(3)	
	1	-	-	-	-		20(1)	7	21(2)	13(1)	
	2	+	+	+	x		+	+	+	23(2)	
571		-	-	-	+		18(2)	20	30(1)	+	
	5	+	x	-	+		+	20	30(1)	+	

Table 2 B[1] Continued

School	Grade	Year of Administration: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Classroom Average % of Minority Boys: Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
598		+	-	-	x		+	22	21(3)	26(5)	
		+	-	-	x		+	19	19(2)	27(2)	
	1	+	-	-	-		+	29	25(1)	+	
	2-3	+	+	+	-		+	+	+	27(2)	
	2	+	+	+	-		+	+	+	23(1)	
	4										
620		x	x	x	x		34(27)	38	42(23)	37(30)	
		-	-	x	x		52(5)	44	44(5)	52(6)	
	1	x	-	-	x		35(5)	45	59(4)	38(5)	
	2	-	x	-	x		26(5)	36	41(4)	42(5)	
	3	x	x	x	x		29(4)	30	28(4)	37(5)	
	4	x	x	-	-		33(4)	15	32(2)	21(5)	
	5	x	-	-	-		23(4)	43	44(4)	28(4)	
	6										
661		-	-	-	-		12(5)	27	25(5)	28(8)	
		-	-	-	-		9(1)	27	31(1)	30(3)	
	1	-	-	-	x		+	31	29(1)	50(1)	
	2	+	-	-	-		+	33	20(1)	25(1)	
	3	+	+	+	x		+	+	+	29(1)	
	4	-	-	-	-		7(1)	36	36(1)	8(1)	
	5	+	-	-	-		+	8	10(1)	19(1)	
	6										
724		-	-	-	-		19(11)	10	15(3)	17(5)	
		-	-	-	-		13(3)	15	17(2)	16(2)	
	1	-	-	-	+		25(2)	+	12(1)	+	
	2	+	+	+	-		+	+	+	17(1)	
	3-4	+	+	+	-		+	+	+	15(1)	
	5	+	+	+	-		+	+	+	20(1)	
	6										
733		-	-	x	-		31(19)	32	34(17)	34(18)	
		-	-	-	-		28(4)	26	28(4)	40(4)	
	1	-	-	-	-		32(3)	32	35(3)	29(3)	
	2	-	-	-	-		23(4)	41	51(2)	32(4)	
	3	-	-	-	-		39(3)	27	25(1)	43(2)	
	4	-	-	-	-		30(2)	39	40(2)	24(2)	
	5	-	-	x	-		34(2)	39	33(2)	28(2)	
	6	x	-	-	-		40(1)	30	36(1)	42(1)	
	5-6	x									
751		-	-	-	-		21(11)	30	27(10)	35(11)	
		-	-	-	-		33(2)	38	38(2)	45(2)	
	1	-	-	-	-		26(2)	24	18(2)	32(2)	
	2	-	-	-	-		19(2)	40	40(2)	39(2)	
	3	-	-	-	-		9(2)	30	27(1)	41(2)	
	4	-	-	-	-		23(2)	21	14(2)	27(1)	
	5	-	-	-	-		13(1)	23	23(1)	22(2)	
	6										
819		-	x	x	-		21(7)	29	26(8)	30(11)	
		-	x	x	-		13(2)	41	30(2)	51(2)	
	1	x	-	-	-		24(2)	29	23(2)	40(2)	
	2	-	-	-	-		26(2)	31	31(2)	23(2)	
	3	-	-	-	-		22(1)	16	22(1)	19(2)	
	4	+	+	+	-		+	+	+	30(2)	
	5	+	+	+	-		+	+	+	10(1)	
	6										

Table 2 B[1] Continued

School	Grade	Year of Administration					Classroom Average % of Minority Boys				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
913		-	-	-	+		25(6)	22	20(2)	+	
	4-5	+	-	x	+		+	20	15(1)	+	
	6	-	-	-	+		36(1)	23	25(1)	+	
922		-	x	-	-		24(11)	28	27(11)	22(10)	
	1	-	-	-	-		25(3)	30	31(2)	8(1)	
	2	-	-	-	-		27(2)	24	23(2)	30(2)	
	3	-	x	-	-		29(2)	24	20(2)	27(3)	
	4	+	x	-	-		+	30	27(2)	24(1)	
	4-5	+	+	+	-		+	+	+	8(1)	
	5	x	-	-	-		26(2)	33	36(1)	20(2)	
	6	-	-	x	-		8(1)	27	27(2)	+	
931		+	+	+	-		+	+	+	20(1)	
	3	+	+	+	-		+	+	+	20(1)	

a. Pluses indicate that no sociogram information was compiled because there were not at least four minority students in a classroom at that grade level for that school.

b. Dashes indicate that no statistically significant segregative choices were made.

c. X's indicate that segregative choices were statistically significant ($p < .05$) for that particular grade level.

d. Number in parenthesis for Fall 1977 indicate the total number of classrooms administered the sociogram at that building and at that grade level.

e. Number in parenthesis for Spring 1979 indicate the total number of classrooms administered the sociogram at that building and at that grade level. The classrooms are the same rooms for both the Fall 1978 and Spring 1979 administration.

TABLE 3 A

Sociogram Results For Classrooms With At Least Four Minority Girls
Fall 1977 through Spring 1980

School	Grade	Year of Administration					Classroom Average % of Minority Girls				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
436		x	x	x	-		41(14)	44(10)	45(12)	51(10)	
	1	x	+	-	-		38(3)	+	42(2)	54(1)	
	2	x	x	-	-		45(4)	46(2)	45(2)	44(1)	
	3	-	-	x	-		39(2)	48(3)	49(3)	52(2)	
	4	x	x	x	-		40(2)	32(2)	32(2)	55(4)	
	4-5	-	+	+	+		33(1)	+	+	+	
	5	x	x	-	x		48(2)	33(1)	44(1)	47(1)	
	5-6	+	x	x	+		+	50(1)	50(1)	+	
	6	+	x	-	-		+	60(1)	60(1)	45(1)	
490		x	x	x	x		40(22)	42(20)	42(17)	43(19)	
	1	-	-	-	x		40(5)	56(2)	42(2)	43(3)	
	2	+	x	-	x		+	43(4)	47(4)	33(2)	
	2-3	x	+	+	+		46(10)	+	+	+	
	3	+	x	x	x		+	46(6)	46(6)	54(5)	
	4-5	x	x	x	x		32(4)	38(5)	34(3)	46(5)	
	5-6	x	x	x	x		32(3)	32(3)	38(2)	32(4)	
503		-	x	x	x		36(4)	37(5)	42(7)	35(9)	
	1	+	x	-	-		+	43(2)	50(2)	31(2)	
	2	-	-	-	-		31(1)	27(1)	37(2)	56(1)	
	3	+	-	x	x		+	43(1)	43(2)	39(2)	
	4	-	+	+	-		40(1)	+	+	38(2)	
	5-6	-	+	+	-		31(1)	+	+	25(1)	
	6	x	x	x	-		42(1)	31(1)	33(1)	21(1)	
526		x	x	x	x		45(7)	41(6)	41(6)	41(6)	
	1	x	+	+	-		47(3)	+	+	33(1)	
	2	+	-	x	+		+	40(3)	41(3)	+	
	3	+	+	+	-		+	+	+	39(2)	
	4	-	+	+	+		50(1)	+	+	+	
	5	x	-	x	-		45(2)	44(2)	45(2)	50(1)	
	6	-	x	x	x		36(1)	38(1)	33(1)	42(2)	
620		x	x	x	x		42(23)	48(14)	47(13)	46(20)	
	1	x	-	-	-		44(5)	43(2)	44(2)	50(5)	
	2	-	x	-	-		41(5)	44(2)	57(2)	62(2)	
	3	x	-	-	-		40(4)	48(4)	47(3)	41(4)	
	4	x	x	x	x		41(2)	50(3)	47(2)	40(5)	
	5	x	+	-	x		41(3)	+	27(1)	49(3)	
	6	x	-	-	x		41(4)	52(3)	49(3)	36(1)	
733		x	x	x	-		46(9)	43(9)	39(10)	41(11)	
	1	-	-	-	-		59(2)	35(2)	35(2)	42(1)	
	2	+	x	x	-		+	43(3)	39(3)	40(1)	
	3	-	+	+	-		44(1)	+	+	41(4)	
	4	-	-	x	-		27(1)	55(1)	40(2)	33(1)	
	5	-	x	x	-		42(2)	43(1)	44(1)	41(2)	
	5-6	x	-	x	x		43(2)	47(1)	53(1)	43(1)	
	6	x	-	-	-		55(1)	45(1)	33(1)	50(1)	

TABLE 3 A Continued

School	Grade	Year of Administration					Classroom Average % of Minority Girls				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
751		x	-	-	-		30(5)	41(6)	39(6)	42(7)	
	1	-	-	-	-		32(2)	31(1)	33(1)	36(1)	
	2	-	-	-	-		31(1)	39(2)	36(2)	44(2)	
	3	x	-	-	-		29(1)	48(2)	42(2)	35(2)	
	4	-	+	+	-		29(1)	+	+	69(1)	
	5	+	-	-	+		+	42(1)	45(1)	+	
	6	+	+	+	-		+	+	+	29(1)	

TABLE 3 B

Sociogram Results For Classrooms With At Least Four Minority Boys
Fall 1977 through Spring 1980

School	Grade	Year of Administration					Classroom Average % of Minority Boys				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
436		x	x	x	x		43(11)	47(15)	47(15)	50(15)	
	1	x	-	x	-		40(4)	49(3)	54(3)	55(2)	
	2	-	-	-	-		36(1)	43(2)	45(3)	57(3)	
	3	-	-	-	x		49(3)	56(2)	56(1)	51(3)	
	4	-	-	x	-		42(1)	40(3)	42(3)	56(1)	
	5	x	-	-	x		43(2)	56(1)	53(2)	43(3)	
	5-6	+	-	+	+		+	50(1)	+	+	
	6	+	x	x	x		+	42(3)	39(3)	46(3)	
490		-	x	x	x		45(8)	42(15)	44(13)	42(14)	
	1	-	-	-	-		40(2)	53(3)	50(4)	39(2)	
	2	+	-	-	-		+	37(2)	36(1)	36(2)	
	2-3	-	+	+	+		49(5)	+	+	+	
	3	+	-	-	+		+	47(4)	57(1)	+	
	4-5	+	x	x	x		+	36(5)	40(5)	45(5)	
	5-6	-	x	x	x		33(1)	31(1)	42(2)	42(5)	
503		-	x	x	-		39(3)	33(4)	39(9)	38(9)	
	1	+	x	x	+		+	29(1)	33(2)	+	
	2	-	-	-	-		42(1)	29(1)	38(2)	36(2)	
	3	-	+	x	x		45(1)	+	43(2)	44(2)	
	4	+	+	-	-		+	+	56(1)	36(2)	
	5	+	-	-	x		+	45(1)	40(1)	31(1)	
	5-6	-	+	+	-		29(1)	+	+	46(1)	
	6	+	-	-	-		+	27(1)	27(1)	36(1)	
526		x	x	x	x		40(9)	39(11)	37(14)	37(8)	
	1	-	x	x	+		40(2)	47(2)	43(3)	+	
	2	-	+	-	-		40(1)	+	45(2)	50(1)	
	3	+	-	+	x		+	45(2)	+	36(2)	
	4	x	-	-	+		43(4)	25(1)	27(3)	+	
	5	x	x	x	x		34(2)	40(4)	38(4)	32(2)	
	6	+	x	x	x		+	31(2)	37(2)	37(3)	
620		x	x	x	x		44(13)	45(13)	50(14)	47(17)	
	1	-	-	x	x		52(5)	49(4)	47(4)	59(5)	
	2	x	-	-	x		45(2)	56(2)	62(3)	42(4)	
	3	-	x	-	x		29(1)	36(3)	45(3)	45(4)	
	4	-	x	x	x		35(2)	33(3)	34(2)	40(3)	
	5	x	+	+	+		43(2)	+	+	+	
	6	x	-	-	-		33(1)	71(1)	61(2)	33(1)	
733		x	-	x	-		38(11)	36(11)	37(13)	39(12)	
	1	-	-	-	-		39(2)	36(2)	32(3)	44(3)	
	2	-	-	-	-		35(2)	34(2)	38(2)	35(2)	
	3	-	-	-	-		27(1)	45(1)	51(2)	41(2)	
	4	-	-	x	-		51(2)	27(2)	25(1)	43(2)	
	5	-	-	-	x		36(1)	39(2)	40(2)	26(1)	
	5-6	x	+	-	-		40(1)	+	36(1)	42(1)	
	6	x	-	x	-		34(2)	39(2)	33(2)	33(1)	

TABLE 3 B Continued

School	Grade	Year of Administration					Classroom Average % of Minority Boys				
		Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1977	Fall 1978	Spring 1979	Fall 1979	Spring 1980
751		-	-	-	-		34(3)	39(4)	39(5)	40(8)	
	1	-	-	-	x		40(1)	38(2)	38(2)	43(2)	
	2	-	+	-	-		31(1)	+	36(1)	32(2)	
	3	+	-	-	-		+	40(2)	40(2)	50(1)	
	4	+	+	+	-		+	+	+	41(2)	
	5	-	+	+	+		31(1)	+	+	+	
	6	+	+	+	-		+	+	+	36(1)	

Table 3 (boys and girls taken separately) presents the results of the analysis of subsetting the classrooms to those rooms containing at least four minority students of the same sex. (A caution is necessary at this point when interpreting the results of this analysis. The classrooms presented in Table 3 are not necessarily the same rooms for both boys and girls, since some rooms presented in Table 2 could have had 3 minority girls and 1 minority boy).

This test, not present in any study to date that we are familiar with, was employed to examine whether the relationship of significant segregative choices to minority percentage enrollment in a classroom(s) would be substantiated. Table 3 reveals that girls made a higher frequency of segregative choices at the fifth and sixth grade levels, relative to Grades 1-4, the same pattern was exhibited by the boys data. Although the data presented in Table 2 for boys and girls, indicated that girls had a higher frequency of segregative choices throughout the grade levels as compared to boys, this gap narrowed tremendously by invoking the "at least four minority students of the same sex" criterion. For the data appearing in Table 2 for girls, 64 significant and 89 nonsignificant entries are reported, compared to 43 significant and 80 nonsignificant entries appearing in Table 3. For boys, 43 significant and 109 nonsignificant entries appear in Table 2, whereas 39 significant and 84 nonsignificant entries are reported in Table 3 for boys. Thus a considerable proportion of the number of segregative choices for boys and girls reported in Table 2 were accounted for by there being at least 4 minority students of either sex in a classroom[1]. However, despite the subsetting criterion the

1. When comparing Tables 2 with 3 for boys (girls) it is noted, that for the most part the average minority percentage figures tend to increase. Likewise the vast majority of significant (nonsignificant) patterns reported for boys (girls) remained significant (nonsignificant) after invoking the "at least four criterion" for either sex, as can be discovered by a careful comparison of the appropriate tables. There

relation between segregative choice and percentage of minority enrollment was not confirmed; i.e., the higher the percentage of minority students in a classroom the more likely the significance of segregative choices being made by the students was not evident.

Thus on the basis of this stricter test, although a critical mass seems to exist which accounts for the majority of significant segregative choices made by girls and boys alike, attributing the patterns to a function of the "percentage minority" within a classroom above this critical point was not substantiated. It does appear reasonable to speculate that classroom atmosphere, attitudes etc., both of the teacher and students within a classroom as well as the school play a crucial role in explaining the choice patterns of students.

DISCUSSION

With the adoption of the Des Moines Desegregation Program the reduction of the elementary pupil assignments in a group of seven elementary buildings, adjusting the percentage of minority students to a level acceptable to OCR, has occurred. This paper has attempted to address the integrative impact of this action. The study, although incomplete (the administration of the Spring 80 sociogram yet to be given) will have monitored an aspect of classroom social climate produced in part by those students attending the target schools over a three year period.

do exist a few changes after the subsetting criterion had been invoked. For example, school no. 436, Grade 1, Spring 1979, changed from significant in Table 2 to nonsignificant in Table 3. There were 3 such changes for the boys data (12 such changes for the girls analysis). Four changes from nonsignificant to significant choice patterns occur for boys, 3 for girls. Seven entries in Table 2 changed from significant to not being included in Table 3 because the at least four criterion for girls was not met, 2 such changes occurred for boys.

No empirical data exist detailing the interracial atmosphere in the seven schools prior to the plans implementation suggesting that a high percentage of minority students in any one of these schools is tantamount to unhealthy race relations, although one can infer that a lack of racial mixing affords the races less of a chance to come to a better understanding of each other. Thus desegregation occurs to facilitate this "mixing," accompanied by the altrustic motive that true integration will result (improving racial attitudes, awareness, understanding, raising test scores, etc.).

This report does not attempt to reach a verdict with regards to the success or failure of this action. It does suggest that the percentage of minority students in a classroom has a minimal effect on the integrative choice patterns sustained over time. Thus, although interracial contact is recognized as one condition related to successful race relation outcomes (Slavin and Madden, 1979), the "contact hypothesis" takes on a new feature if interracial attitudes are to be more directly influenced and facilitated as discussed by Cook, 1978; Slavin, 1978; Slavin and Madden, 1979.

It could be that "waiting it out," i.e., longevity of exposure, will facilitate integration, thus time becomes the critical variable. Still there is no certainty that time heals all evils. We do know, after confering with the Director of Intercultural Affairs and the Executive Director of Elementary Education, that the evidence presented here is consistent with their knowledge of "problems" associated with various schools and classrooms, and that the information presented will be used to study these "problems" in depth to arrive at viable solutions.

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